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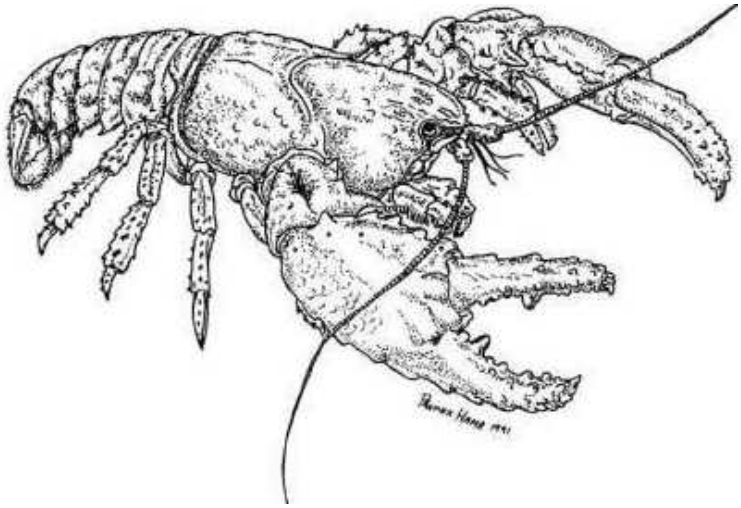

Slime mould log

by **Sarah Lloyd**

17th April | 20 April

Physarum compressum

April 20th 2013

Physarum compressum

I have found *Physarum compressum* several times during the past few years and always on dead clematis (*Clematis aristata*), a vine that's common in the places I regularly check for slime moulds. *P. compressum* is a fairly distinctive species because its stalked sporangia are laterally compressed and more or less fan-shaped. The latest colony I found in Thismia Gully consisted of scattered and gregarious sporangia on the dead wood of the clematis vine, on the moss that covered part of the vine and also on a eucalypt log on the ground on which the vine had fallen.

I always make a note of the substrate on which I find slime moulds. However, it is difficult to determine if slime moulds have substrate preferences. The two trophic (feeding) stages of slime moulds operate within the soil or dead organic matter. When they are ready to transform to produce their fruiting structures, the plasmodia migrate to the outer surface of logs, stumps, dead leaves or other substrate. Therefore, where the fruiting bodies are found does not necessarily indicate where they function during their two trophic stages.

Didymium sp.

Didymium sp.

While in Thismia Gully I usually check a large, eucalypt log that looks as if it's been lying on the ground for many decades as it is well rotted and has a good covering of moss and leafy liverworts. There are usually extensive colonies of *Lamproderma* species on the moss, but none have appeared this year - perhaps because it's too early for some species.

What caught my eye during this visit were several white spheres on a dead leaf that had fallen on the log. After some searching in the same

location I found half a dozen leaves - one eucalypt and five dogwood (*Pomaderris apetala*) - each dotted with sporangia that could be *Didymium* sp.

The fruiting bodies are about 1 mm total height. The stalk is 0.5 mm, umbilicate and pale buff colour and there is a distinctive columella. They resemble *D. applanatum* but don't have the longitudinal ridges of that species. The spores are minutely warted.

Unidentified slime mould

Complete mystery!

On March 3 2013 on the same log I found an extremely distinctive species that I've not seen here before. One large fruiting body was on exposed wood and another smaller one was about one metre away. The hypothallus was bright red/orange and the bright yellow fruiting body resembled an immature *Fuligo septica*. However, unlike *F. septica*, which usually fades to a very pale lemon colour, this one remained bright yellow.
Also unlike *F. septica*, that has a crust-like cortex, the peridium of this species is extremely delicate. Furthermore, while it superficially resembles an aethalium it could be piled up plasmodiocarps. Its dark brown spores have no distinctive markings when viewed with a (somewhat inadequate) compound microscope.

Enerthenema sp.

April 17th 2013

The lack of entries on the slime mould log is not because there haven't been slime moulds appearing at Black Sugarloaf lately. Far from it! Since the last posting I have collected numerous specimens including a few that have not been recorded here before.

Enerthenema sp. is a very distinctive species despite being only about 1 mm tall. It could be mistaken for a *Comatricha* species except that it has a shiny apical disc. That is, a tiny (0.2 mm diameter) cup-shaped disc at the top of the columella. The capillitium is attached to the apical disc and the threads hang down much like streamers from a maypole.
It is apparently quite common in moist chamber cultures, but I found it in the field on the upper surface of a dead dogwood (*Pomaderris apetala*).

Cribraria cancellata

Cribraria cancellata (formerly *Dictydium cancellatum*) appeared on April 6th on a blackwood (*Acacia melanoxylon*) log that is extremely productive for slime moulds.
I've only seen *C. cancellata* twice before so it's certainly not 'common and widespread' despite being described thus by Stepehenson. The first time I saw it was several years ago and I lost track of it; the second time was the following year and I left it in the field with the intention of collecting it the following day—it was not far from the house. Unfortunately it rained that night and all the sporangia got washed away.

Lesson: always collect when you see good specimens!
The reddish-coloured *C. cancellata* is quite a distinctive species. It has the peridial net characteristic of the genus, but unlike other *Cribraria* species the net has longitudinal ribs connected by transverse ladder-like threads. The top of the stipe is very fine; all the sporotheca are nodding in the specimens I collected.

The beautiful *Physarum flavicomum* appeared in the swamp on the same small log as last year.

Lots of *Arcyria* species have been collected in the past few months. Some are tan brown, so are possibly *A. obvelata*; some are reddish coloured and could be *A. denudata* or *A. affinus*.


Physarum flavicomum


Arcyria obvelata


Arcyria sp.

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